



Available online at

SciVerse ScienceDirect
www.sciencedirect.com

Elsevier Masson France

EM|consulte
www.em-consulte.com/en


IMAGE

A sword of Damocles in an asymptomatic man presenting with serendipitously detected ventricular pre-excitation

Une épée de Damoclès chez un patient asymptomatique présentant une préexcitation ventriculaire découverte de manière fortuite

Pascal Defaye*, Adama Kane,
Romain Cassagneau, Peggy Jacon

Arrhythmia Unit, Cardiology Department, University Hospital, Grenoble, France

Received 22 November 2010; accepted 8 April 2011

Available online 6 November 2011

KEYWORDS

Wolf-Parkinson-White syndrome;
Ventricular fibrillation;
Atrial fibrillation

MOTS CLÉS

Syndrome de Wolf-Parkinson-White ;
Fibrillation ventriculaire ;
Fibrillation atriale

A 25-year-old man was admitted to hospital for electrophysiological studies for Wolf-Parkinson-White syndrome, discovered during a medical clearance examination to be a professional soccer referee. This athlete had no medical history, reported no symptoms and his physical examination was normal. A 12-lead electrocardiogram revealed the presence of ventricular pre-excitation, a negative delta wave in leads I and aVL, and right bundle branch-type QRS morphology, consistent with a left lateral accessory pathway (Fig. 1), which persisted during peak exercise.

Electrophysiological studies confirmed the presence of a left lateral accessory pathway and the induction of atrial fibrillation by rapid atrial pacing, immediately followed by the development of ventricular fibrillation (Fig. 2a, b), requiring the delivery of two consecutive biphasic 200J DC shocks to restore sinus rhythm (Fig. 3a). The patient underwent transseptal radiofrequency ablation of the left lateral accessory pathway (Fig. 3b).

This observation illustrates the potential high risk associated with asymptomatic ventricular pre-excitation due to: an accessory atrioventricular pathway with very rapid

* Corresponding author.

E-mail address: PDefaye@chu-grenoble.fr (P. Defaye).

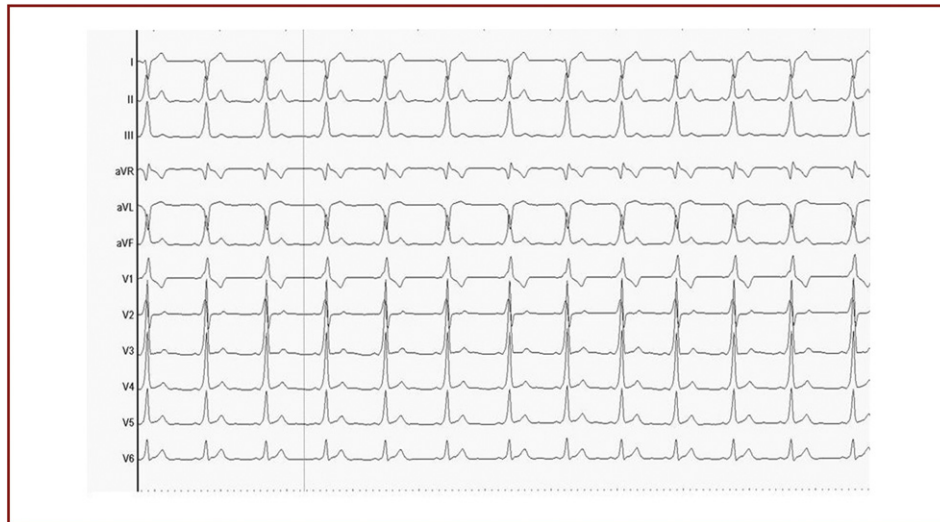


Figure 1. Twelve-lead electrocardiogram showing presence of ventricular pre-excitation with negative delta wave in leads I and aVL, and right bundle branch-type QRS morphology, consistent with a left lateral accessory pathway.

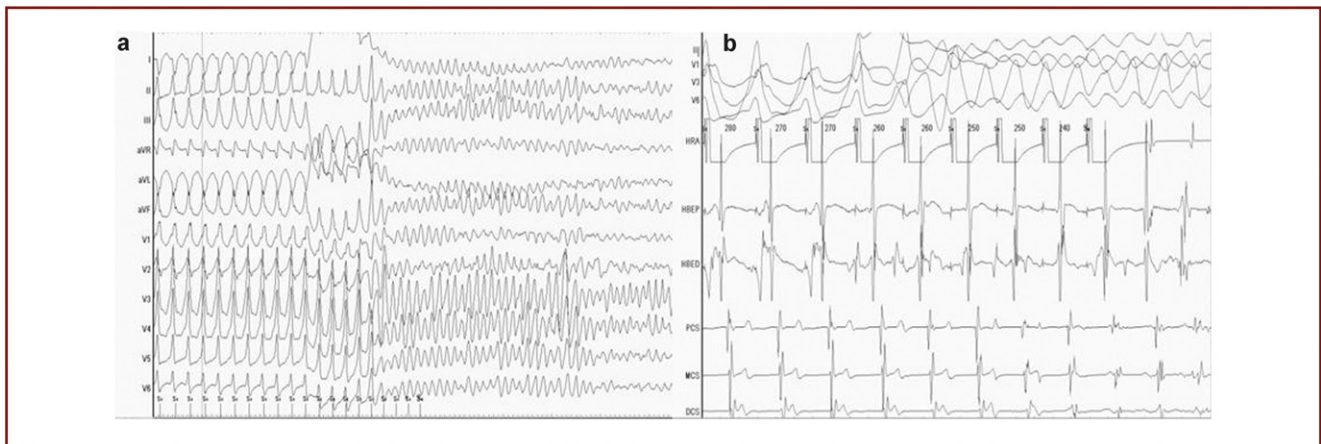


Figure 2. Electrophysiological (EP) study confirming the presence of a left lateral accessory pathway and the induction of atrial fibrillation by rapid atrial pacing, immediately followed by the development of ventricular fibrillation: a: twelve-lead electrocardiogram during EP study; b: intracardiac recordings showing induction of ventricular fibrillation. HRA: high right atrium; HBEP: His bundle electrogram proximal; HBED: His bundle electrogram distal; PCS: proximal coronary sinus; MCS: medium coronary sinus; DCS: distal coronary sinus.

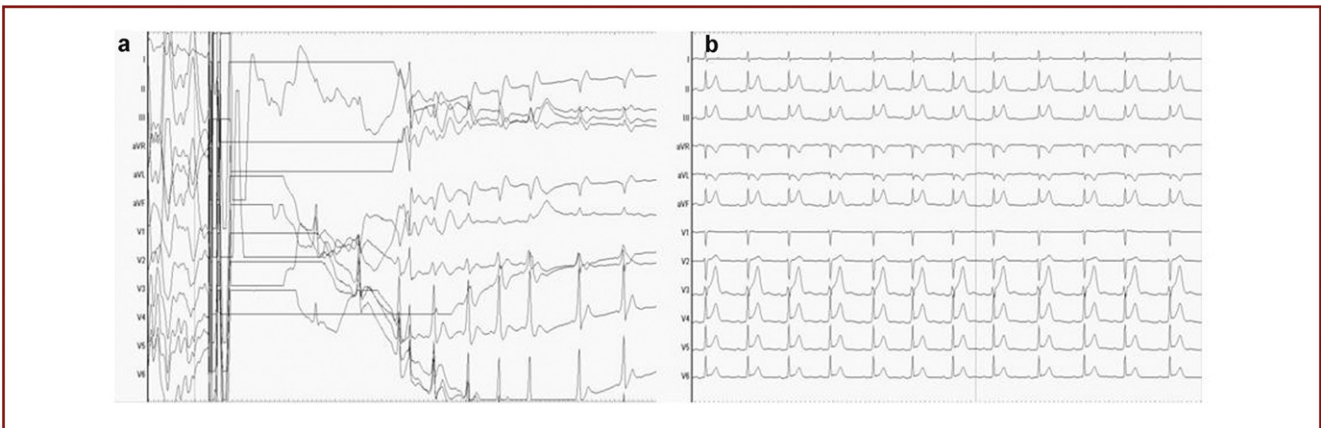


Figure 3. a: transthoracic defibrillation with a 200J biphasic DC shock, restoring sinus rhythm; b: post-ablation surface electrocardiogram showing the elimination of ventricular pre-excitation.

anterograde conductive properties; and the immediate induction of ventricular fibrillation by 1:1 atrioventricular transmission of atrial tachyarrhythmias. This patient was living under a sword of Damocles.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.